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Fig.1.

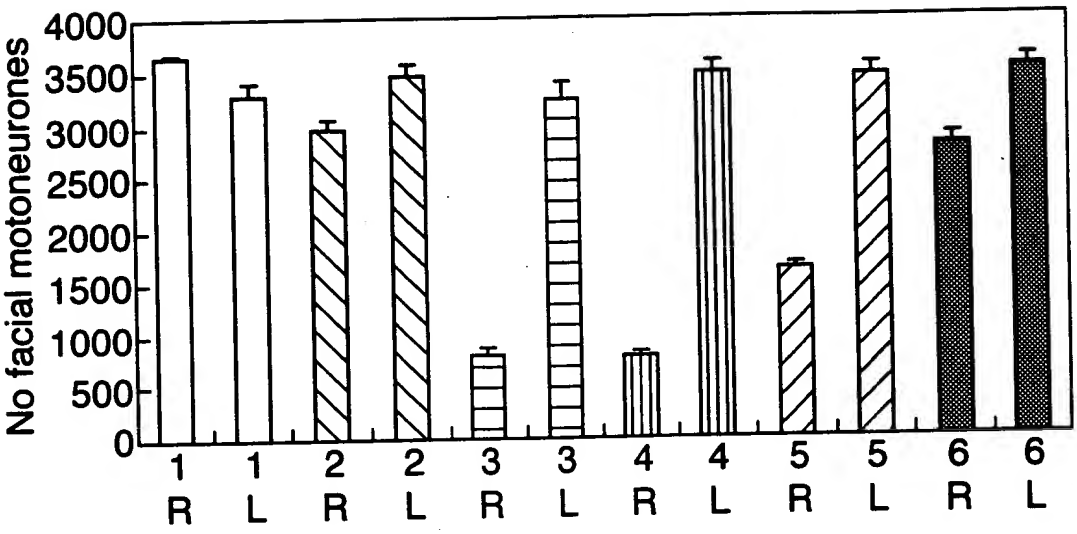


Fig.2a.

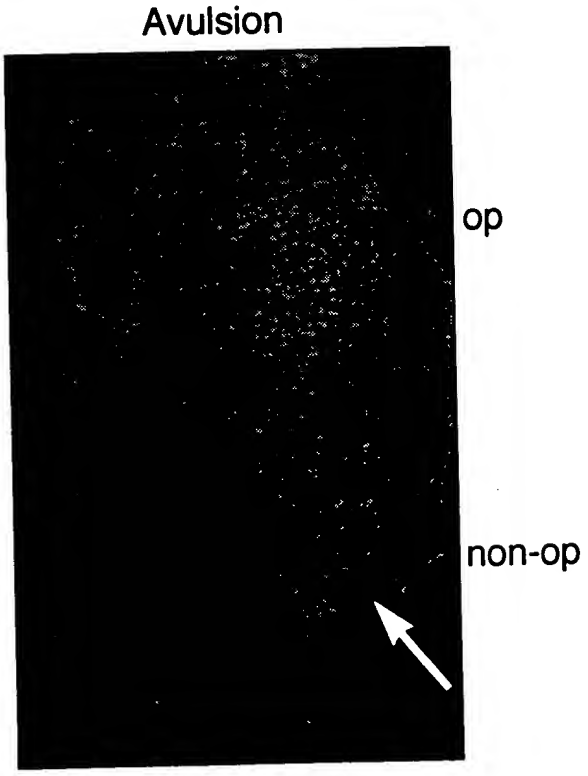


Fig.2b.

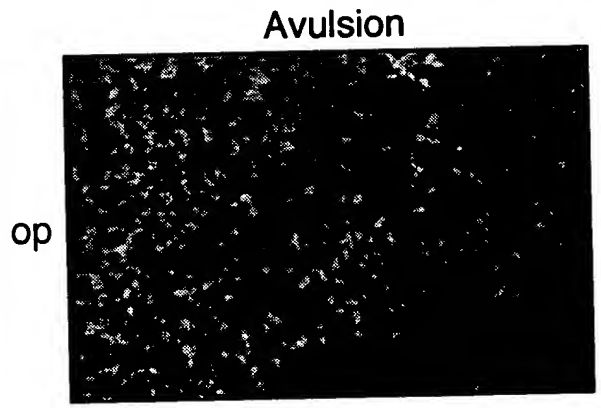


Fig.2c.

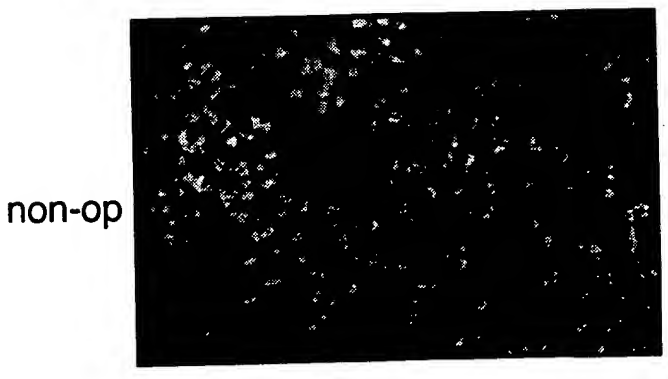
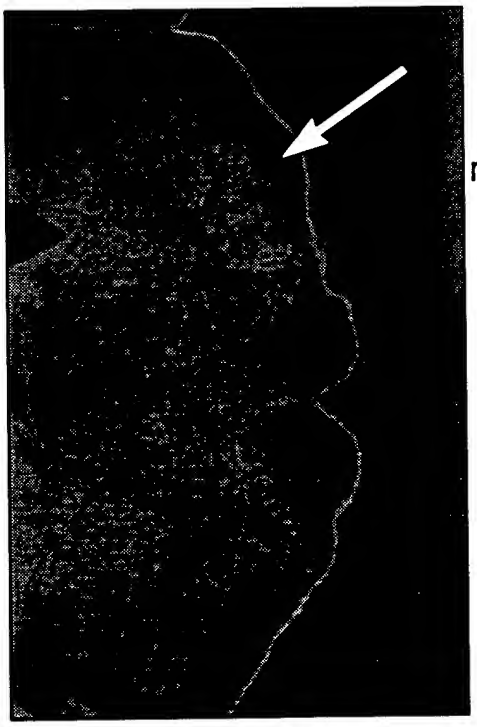


Fig.3a.

Plasmid



non-op

op

Fig.3b.

Plasmid

non-op

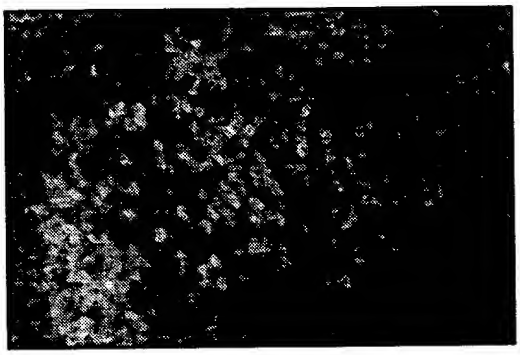


Fig.3c.

Plasmid

op

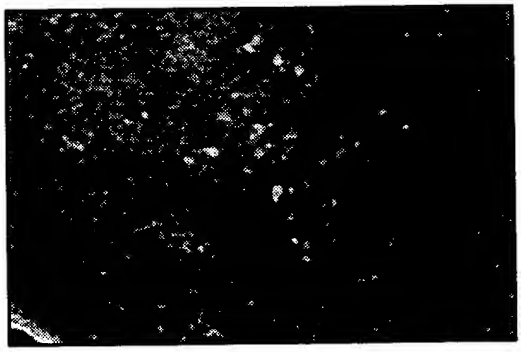
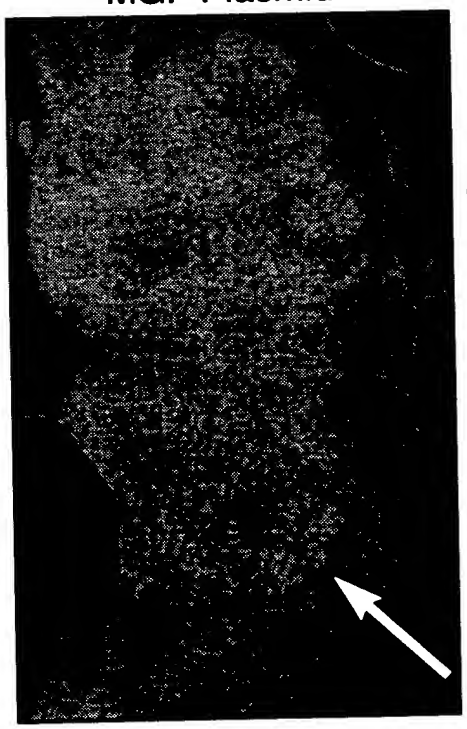


Fig4a.

MGF Plasmid



op

non-op

Fig4b.

MGF Plasmid

op

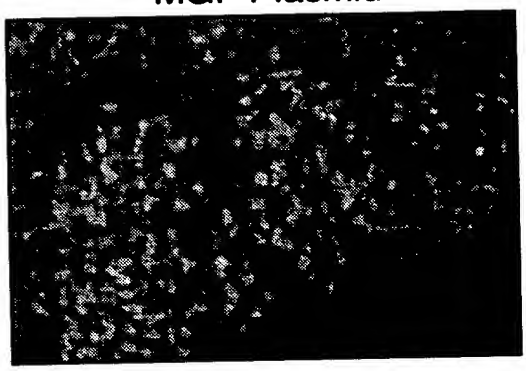


Fig4c.

MGF Plasmid

non-op

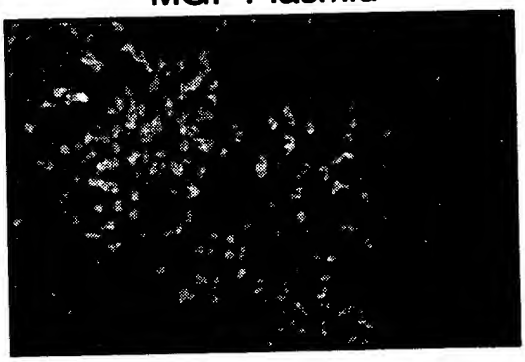


Fig.5.

cDNA sequence of Human MGF

Exon 3

GGACCGGAGACGCTCTGCGGGGCTGAGCTGGTGGATGCTCTTCAGTTCGTGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCCACAGGGTATGGCTCCAGCAGTCGG

Exon 4

AGGGCGCCTCAGACAGGCATCGTGGATGAGTGCTGCTTCCGGAGCTGTGATCTAAGGAGGCTGGAGATGTATTGCGCACCCCTCAAGCCTGCCAAGTCAGCTCGCTC

TGTCCGTGCCCAGCGCCACACCGACATGCCCAAGACCCAGAAGTATCAGCCCCCATCTACCAACAAGAACACGAAGTCTCAGAGAAGGAAAGGAAGTACATTTGAAG

Exon 5

Exon 6

ACACAAGTAGAGGGAGTGCAGGAAACAAGAACTACAGGATGTAGAAGACCCTTCTGAGGAGTGAAGAAGGACAGGCCACCGCAGGACCCTTTGCTCTGCACAGTTA

CCTGTAAACATTGGAATACCGGCCAAAAAATAAGTTTGATCACATTTCAAAGATGGCATTTCCCCCAATGAAATACACAAGTAAACAT

Protein sequence of Human MGF

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerAr

Exon 4

gArgAlaProGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgS

erValArgAlaGlnArgHisThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysAsnThrLysSerGlnArgArgLysGlySerThrPheGlu

Exon 5

Exon 6

GluHisLys

cDNA sequence of Rat MGF

Fig.6.

Exon 3

GGACCAGAGACCCTTTGCGGGGCTGAGCTGGTGGACGCTCTTCAGTTCGTGTGTGGACCAAGGGGCTTTTACTTCAACAAGCCCACAGTCTATGGCTCCAGCATTCG

Exon 4

GAGGGCACCACAGACGGGCATTGTGGATGAGTGTTGCTTCCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGTCCGCTGCAAGCCTACAAAGTCAGCTCGTT

CCATCCGGGCCCAGCGCCACACTGACATGCCCAAGACTCAGAAGTCCCAGCCCCTATCGACACACAAGAAAAGGAAGCTGCAAAGGAGAAGGAAAGGAAGTACACTT

Exon 5

GAAGAACACAAGTAGAGGAAGTGCAGGAAACAAGACCTACAGAATGTAGGAGGAGCCTCCCGAGGAACAGAAAATGCCACGTCACCGCAAGATCCTTTGCTGCTTGA

Exon 6

GCAACCTGCAAAACATCGGAACACCTGCCAAATATCAATAATGAGTTCAATATCATTTCAGAGATGGGCATTTCCCTCAATGAAATACACAAGTAAACATTCCCGGA

ATTC

Protein sequence of Rat MGF

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleAr

Exon 4

gArgAlaProGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgS

erIleArgAlaGlnArgHisThrAspMetProLysThrGlnLysSerGlnProLeuSerThrHisLysLysArgLysLeuGlnArgArgArgLysGlySerThrLeu

Exon 5

GluGluHisLys

Exon 6

cDNA sequence of Rabbit MGF

Fig.7.

Exon 3

GGACCGGAGACGCTCTGCGGTGCTGAGCTGGTGGATGCTCTTCAGTTCGTGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCCACAGGATACGGCTCCAGCAGTCGGAGGGCACC

Exon 4

TCAGACAGGCATCGTGGATGAGTGCTGCTTCCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGCACCCCTCAAGCCGGCAAAGGCAGCCCGCTCCGTCCGTGCCCAGCGCC

ACACCGACATGCCCAAGACTCAGAAGTATCAGCCTCCATCTACCAACAAGAAAATGAAGTCTCAGAGGAGAAGGAAAGGAAGTACATTTGAAGAACACAAGTAGAGGGAGTGCAGG

Exon 5

Exon 6

AAACAAGAACTACAGGATGTAGGAAGACCCTTCTGAGGAGTGAAGAAGGACAGGCCACGGCAGGACCCTTTGCTCTGCACAGTTACCTGTAAACATTGGAATACCGGCCAAAAAAT

AAGTTTGATCACATTTCAAAGATGGCATTTCCCCCAATGAAATACACAAGTAAACATTC

Protein sequence of Rabbit MGF

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr

Exon 4

oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysAlaAlaArgSerValArgAlaGlnArgH

isThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysLysMetLysSerGlnArgArgArgLysGlySerThrPheGluGluHisLys

Exon 5

Exon 6

Fig.8.

cDNA sequence of Human L.IGF-1

Exon 3

GGACCGGAGACGCTCTGCGGGGCTGAGCTGGTGGATGCTCTTCAGTTCGTGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCCACAGGGTATGGCTCCAGCAGTCGGAGGGCGCC

Exon 4

TCAGACAGGCATCGTGGATGAGTGCTGCTTCCGGAGCTGTGATCTAAGGAGGCTGGAGATGTATTGCGCACCCCTCAAGCCTGCCAAGTCAGCTCGCTCTGTCCGTGCCCAGCGCC

ACAC[illegible]GACATGCCCAAGACCCAGAAGGAAGTACATTTGAAGAACGCAAGTAGAGGGAGTGCAGGAAACAAGAACTACAGGATGTAG

Exon 6

Protein sequence of Human L.IGF-1

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr

Exon 4

oGlnTheGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgSerValArgAlaGlnArgH

isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnAlaSerArgGlySerAlaGlyAsnLysAsnTyrArgMet

Exon 6

cDNA sequence of Rat L.IGF-1

Fig.9.

Exon 3

GGACCAGAGACCCTTTGCGGGGCTGAGCTGGTGGACGCTCTTCAGTTCGTGTGTGGACCAAGGGGCTTTTACTTCAACAAGCCCACAGTCTATGGCTCCAGCATTCGGAGGGCACC

Exon 4

ACAGACGGGCATTGTGGATGAGTGTTGCTTCCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGTCCGCTGCAAGCCTACAAAGTCAGCTCGTTCCATCCGGGCCCAGCGCC

Exon 6

ACACTGACATGCCCAAGACTCAGAAGGAAGTACACTTGAAGAACACAAGTAGAGGAAGTGCAGGAAACAAGACCTACAGAATGTAGGAGGAGCCTCCCGAGGAACAGAAAATGCCA

CGTCACCGCAAGATCCTTTGCTGCTTGAGCAACCTGCAAAACATCGGAACACCTGCCAAATATCAATAATGAGTTCAATATCATTTCAGAGATGGGCATTTCCCTCAATGAAATAC

ACAAGTAAACATTCCCGGAATTC

Protein sequence of Rat L.IGF-1

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleArgArgAlaPr

Exon 4

oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgSerIleArgAlaGlnArgH

Exon 6

isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnThrSerArgGlySerAlaGlyAsnLysThrTyrArgMet

Fig.10.

cDNA sequence of Rabbit L.IGF-1

Exon 3

GGACCGGAGACGCTCTGCGGTGCTGAGCTGGTGGATGCTCTTCAGTTCGTGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCCACAGGATACGGCTCCAGCAGTCGGAGGGCACC

Exon 4

TCAGACAGGCATCGTGGATGAGTGCTGCTTCCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGCACCCCTCAAGCCGGCAAAGGCAGCCCGCTCCGTCCGTGCCCAGCGCC

ACACCGACATGCCCAAGACTCAGAAGGAAGTACATTTGAAGAACACAAGTAGAGGGAGTGCAGGAAACAAGAACTACAGGATGTAGGAAGACCCTTCTGAGGAGTGAAGAAGGACA

Exon 6

GGCACCGCAGGACCCTTTGCTCTGCACAGTTACCTGTAAACATTGGAATACCGGCCAAAAAATAAGTTTGATCACATTTCAAAGATGGCATTTCCCCCAATGAAATACACAAGTA

AACATTC

Protein sequence of Rabbit L.IGF-1

Exon 3

GlyProGluThrLeuCysGlyAlaGlnLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr

Exon 4

pGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysAlaAlaArgSerValArgAlaGlnArgH

isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnThrSerArgGlySerAlaGlyAsnLysAsnTyrArgMet

Exon 6

Fig.11.

Exon 4

Hu MGF -	A | sn Lys Pro Thr Gly Tyr Gly Ser Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys Phe
Rat MGF -	A | sn Lys Pro Thr Val Tyr Gly Ser Ser Ile Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys Phe
Rab MGF -	A | sn Lys Pro Thr Gly Tyr Gly Ser Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys Phe
Hu IGF -	A | sn Lys Pro Thr Gly Tyr Gly Ser Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys Phe
Rat IGF -	A | sn Lys Pro Thr Val Tyr Gly Ser Ser Ile Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys Phe
Rab IGF -	A | sn Lys Pro Thr Gly Tyr Gly Ser Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys Phe

Hu MGF -	Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ser Ala Arg Ser Val
Rat MGF -	Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Val Arg Cys Lys Pro Thr Lys Ser Ala Arg Ser Ile
Rab MGF -	Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ala Ala Arg Ser Val
Hu IGF -	Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Val Arg Cys Lys Pro Thr Lys Ser Ala Arg Ser Val
Rat IGF -	Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ala Ala Arg Ser Val
Rab IGF -	Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ala Ala Arg Ser Val

Exon 5

Hu MGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys | Tyr Gln Pro Pro Ser Thr Asn Lys Asn Thr Lys
Rat MGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys | Ser Gln Pro Leu Ser Thr His Lys Lys Arg Lys
Rab MGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys | Tyr Gln Pro Pro Ser Thr Asn Lys Lys Met Lys
Hu IGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys | ----------
Rat IGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys | ----------
Rab IGF -	Arg Ala Gln Arg His Thr Asp Met Pro Lys Thr Gln Lys | ----------

Exon 6

Hu MGF -	Ser Gln Arg Arg Lys G | ly Ser Thr Phe Glu Glu His Lys
Rat MGF -	Leu Gln Arg Arg Arg Lys G | ly Ser Thr Leu Glu Glu His Lys
Rab MGF -	Ser Gln Arg Arg Arg Lys G | ly Ser Thr Phe Glu Glu His Lys
Hu IGF -	---------- |Glu Val His Leu Lys Asn Ala Ser Arg Gly Ser Ala Gly Asn Lys Asn Tyr Arg Met
Rat IGF -	---------- |Glu Val His Leu Lys Asn Thr Ser Arg Gly Ser Ala Gly Asn Lys Thr Tyr Arg Met
Rab IGF -	---------- |Glu Val His Leu Lys Asn Thr Ser Arg Gly Ser Ala Gly Asn Lys Asn Tyr Arg Met

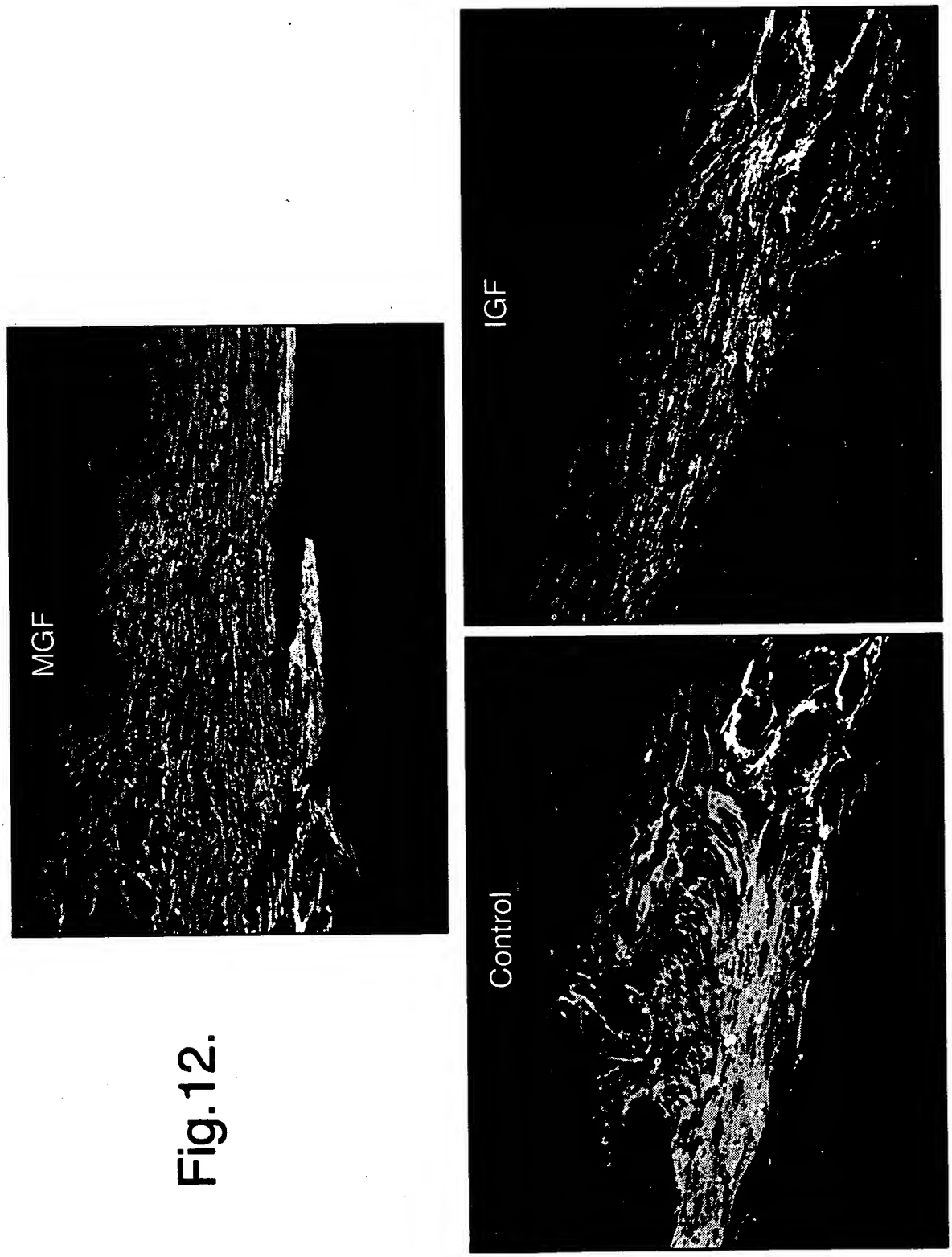


Fig.12.